information is used to update the stored menu content information to produce updated menu content information;

a generator connected to the memory for generating message and menu displays using the updated menu content information, whereby the displays produce subscriber options for selection of other menus and television programs;

a subscriber interface in communication with the generator for selecting messages, menus, television programs or for entry of subscriber inputs; and

a tuner connected to the interface for tuning to one of the digitally compressed program signals to produce a tuned television program signal.

22. (Amended) A method for using an advanced set top terminal with a television program delivery system comprising the following steps:

storing menu content information;

receiving digitally compressed program signals and a control information stream, wherein the control information stream comprises a description of the contents of the program signals, commands to be sent to the set top terminal and transmission information of the control information stream;

processing the control information stream to produce processed control information;

updating the stored menu content information to produce updated menu content information;

generating message and menu displays using the updated menu content information, whereby the menu displays produce subscriber options for selection of other menus and television programs;

selecting the other menus, the television programs or a message display; and

tuning to one of the digitally compressed television programs signals to produce a tuned television program signal.

REMARKS

Claims 1-40 are pending. By this amendment, claims 6, 7 and 22 are amended. No new matter is introduced. The amendments to the claims find support in the claims and specification as originally filed. Amended claims 7 and 22 find support in the specification at least at page 12, lines 3-5. Reconsideration and allowance of the claims in view of the above-amendments and the remarks that follow are respectfully requested.

On page 2 the Examiner requests submission of all nonpatent literature listed in the IDS. A copy of all nonpatent literature listed in the IDS is included as an attachment.

On page 2 the Office Action objects to the specification as failing to provide proper antecedent basis for the claimed subject matter. Specifically, the Office Action asserts that independent claims 1, 12, 16, 27, 31, 36 and dependent claims 10 and 25 do not have antecedent basis for receiving, storing and processing electronic mail. The patent application 09/158,549 is a divisional of parent application 08/160,194, which subsequently issued as U.S. Patent 5,990,927 to Hendricks et al. The parent application 08/160,194 discloses that a "network controller 214 can act as a central computer and provide intra-set top terminal interactive games, inter-set top terminal interactive games, computer bulletin board type services, message services (Electronic mail) etc." (see page 45, line 31 - page 46, line 3). It is implicit that in order for the network controller 214 to provide electronic mail services, there must be receiving, storing and processing of electronic mail. Consequently, independent claims 1, 12, 16, 27, 31, 36 and dependent claims 10 and 25 have antecedent basis for receiving, storing and processing electronic mail. Therefore, the filing date for these claims and their dependent claims is properly accorded the December 2, 1993 filing date of the parent application 08/160,194.

On page 2 the Office Action rejects claim 6 under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 6 has been amended to comply with 35 U.S.C. § 112, second paragraph and is in allowable form. Withdrawal of the rejection of claim 6 under 35 U.S.C. § 112, second paragraph, is respectfully requested.

On page 3 the Office Action rejects claims 7-9 and 22-24 under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent 5,223,924 to Strubbe (hereafter Strubbe). This rejection is respectfully traversed.

The Office Action asserts that Strubbe shows circuitry connected to a television for use with a television program delivery system comprising a receiver for receiving digitally compressed program signals and control information stream.

Strubbe discloses program material as well as data describing future programming provided via a digital transmission system that carries compressed audio/video data together with data for providing in text and graphic form, information about television shows scheduled for the upcoming week (column 2, lines 52-58). However, Strubbe does not teach or suggest a receiver for receiving digitally compressed program signals and a control information stream, wherein the

control information stream comprises a description of the contents of the program signals, commands to be sent to the set top terminal and transmission information of the control information stream.

Claim 7 recites an advanced set top terminal comprising a receiver for receiving digitally compressed program signals and a control information stream, wherein the control information stream comprises a description of the contents of the program signals, commands to be sent to the set top terminal and transmission information of the control information stream. Similarly, claim 22 recites a method for using an advanced set top terminal comprising the step of receiving digitally compressed program signals and a control information stream, wherein the control information stream comprises a description of the contents of the program signals, commands to be sent to the set top terminal and transmission information of the control information stream. As discussed above, Strubbe does not teach or suggest these limitations. Therefore, claims 7 and 22 are allowable.

Claims 8-9 depend from claim 7 and claims 23-24 depend from claim 22. As discussed above, claims 7 and 22 are allowable. For this reason and the additional features they recite, claims 8-9 and 23-24 are allowable. Withdrawal of the rejection of claims 7-9 and 22-24 under 35 U.S.C. § 102(e) is respectfully requested.

On page 5 the Office Action rejects claims 31, 33-36 and 38-40 under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent 5,561,708 to Remillard (hereafter Remillard). This rejection is respectfully traversed.

The Office Action asserts that Remillard shows an advanced set top terminal for use with a television program delivery system comprising at least one memory for storing electronic mail and for storing interactive programming instructions and at least one processor connected to the memory and a subscriber interface for accessing the stored interactive programming instructions and for executing the stored interactive programming instructions to produce interactive signals which include electronic mail.

Remillard discloses an electronic device 20 with a CPU 100 coupled to a memory 102 (Fig. 2). The memory 102 stores instructions, such as an initialization sequence to be executed upon every reset or power-up for self-configuration purposes (column 6, lines 16-17 and lines 25-35). However, Remillard does not teach or suggest a memory that stores electronic mail or interactive programming instructions. Further, Remillard does not teach or suggest at least one

4

processor for accessing stored interactive programming instructions and for executing the stored interactive programming instructions to produce interactive signals which include electronic mail.

Claim 31 recites an advanced set top terminal comprising at least one memory for storing electronic mail and for storing interactive programming instructions and at least one processor connected to the memory and a subscriber interface for accessing the stored interactive programming instructions and for executing the stored interactive programming instructions to produce interactive signals which include electronic mail. Similarly, claim 36 recites a method for using an advanced set top terminal comprising the steps of storing electronic mail, storing interactive programming instructions, accessing the stored interactive programming instructions and executing the stored interactive programming instructions to produce interactive signals which include electronic mail. As discussed above, Remillard does not teach or suggest these limitations. Therefore, claims 31 and 36 are allowable.

Claims 33-35 depend from claim 31 and claims 38-40 depend from claim 36. As discussed above, claims 31 and 36 are allowable. For this reason and the additional features they recite, claims 33-35 and 38-40 are allowable. Withdrawal of the rejection of claims 31, 33-36 and 38-40 under 35 U.S.C. § 102(e) is respectfully requested.

On page 7 the Office Action rejects claims 1, 3-6, 16 and 18-21 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,154,633 to Landgraf et al. (hereafter Landgraf) in view of Remillard. This rejection is respectfully traversed.

The Office Action asserts that Landgraf shows a hardware upgrade for enhancing the functionality of a set top converter in a television program delivery system and an interface for providing an electrical connection to the set top converter, but does not show a set top converter having a mailbox adapted to receive electronic mail, a memory for storing programming instructions and one microprocessor connected to the memory. The Office Action asserts that Remillard shows the set top converter receiving email, a memory for storing interactive programming instructions and at least one microprocessor connected to the memory and the interface for accessing the stored interactive programming instructions and for processing the electronic mail to produce processed electronic mail based on the stored interactive programming instructions.

As discussed above, Remillard discloses an electronic device 20 with a CPU 100 coupled to a memory 102, wherein the memory 102 stores instructions, such as an initialization sequence to be executed upon every reset or power-up for self-configuration purposes (Fig. 2; column 6, lines 16-17 and lines 25-35). However, Remillard does not teach or suggest a memory for storing interactive programming instructions. Further, Remillard does not teach or suggest at least one microprocessor for accessing stored interactive programming instructions and for processing electronic mail to produce processed electronic mail based on the stored interactive programming instructions.

Claim 1 recites a hardware upgrade for enhancing the functionality of a set top converter comprising a memory for storing interactive programming instructions and at least one microprocessor connected to the memory and connected to an interface for accessing the stored interactive programming instructions and for processing electronic mail to produce processed electronic mail based on the stored interactive programming instructions. Similarly, claim 16 recites a method for enhancing the functionality of a set top converter comprising the steps of storing interactive programming instructions, accessing the stored interactive programming instructions and processing electronic mail to produce processed electronic mail based on the stored interactive programming instructions. As discussed above, Landgraf and Remillard, alone or in combination, do not teach or suggest these limitations. Therefore, claims 1 and 16 are allowable.

Claims 3-6 depend from claim 1 and claims 18-21 depend from claim 16. As discussed above, claims 1 and 16 are allowable. For this reason and the additional features they recite, claims 3-6 and 18-21 are allowable. Withdrawal of the rejection of claims 1, 3-6, 16 and 18-21 under 35 U.S.C. § 103(a) is respectfully requested.

On page 10 the Office Action rejects claims 2 and 17 under 35 U.S.C. § 103(a) as being unpatentable over Landgraf in view of Remillard and further in view of U.S. Patent 5,539,449 to Blahut et al. (hereafter Blahut). This rejection is respectfully traversed.

Claim 2 depends from claim 1 and claim 17 depends from claim 16. As discussed above, claims 1 and 16 are allowable. For this reason and the additional features they recite, claims 2 and 17 are allowable. Withdrawal of the rejection of claims 2 and 17 under 35 U.S.C. § 103(a) is respectfully requested.

On page 10 the Office Action rejects claims 10-15 and 25-30 under 35 U.S.C. § 103(a) as being unpatentable over Strubbe in view of Remillard. This rejection is respectfully traversed.

The Office Action asserts that Strubbe shows a system to provide a subscriber electronic mail services with a remotely located computer using a series of individual menus comprising an operations center for generating menu control information in digitally compressed form and transmitting said menu control information.

Strubbe teaches television program material and data describing future programming provided via a digital transmission system which carries compressed audio/video data together with data for providing information about television shows scheduled for the upcoming week (column 2, lines 52-58). However, Strubbe does not teach or suggest generating menu control information related to a system for providing electronic mail services with a remotely located computer using a series of individual menus. Remillard does nothing to cure this defect. Further, Strubbe and Remillard, alone or in combination, do not teach or suggest a text and graphics video plane combiner for integrating the electronic mail into menus.

Claim 12 recites a system to provide a subscriber electronic mail services with a remotely located computer using a series of individual menus comprising an operations center for generating menu control information. Claim 12 also recites a text and graphics video plane combiner for integrating the electronic mail into menus. Similarly, claim 27 recites a method to provide a subscriber electronic mail services with a remotely located computer using a series of individual menus comprising the steps of generating menu control information and integrating the electronic mail into menus. As discussed above, Strubbe and Remillard, alone or in combination, do not teach or suggest these limitations. Therefore, claims 12 and 27 are allowable.

Claims 10-11 depend from claim 7 and claims 25-26 depend from claim 22. As discussed above, claims 7 and 22 are allowable. For this reason and the additional features they recite, claims 10-11 and 25-26 are allowable. Claims 13-15 depend from claim 12 and claims 28-30 depend from claim 27. As discussed above, claims 12 and 27 are allowable. For this reason and the additional features they recite, claims 13-15 and 28-30 are allowable. Withdrawal of the rejection of claims 10-15 and 25-30 under 35 U.S.C. § 103(a) is respectfully requested.

On page 15 the Office Action rejects claims 32 and 37 under 35 U.S.C. § 103(a) as being unpatentable over Remillard in view of Blahut. This rejection is respectfully traversed.
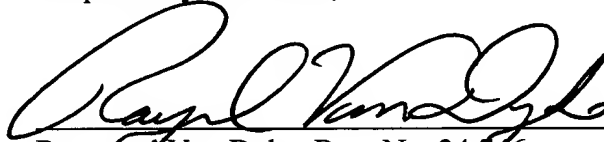
Claim 32 depends from claim 31 and claim 37 depends from claim 36. As discussed above, claims 31 and 36 are allowable. For this reason and the additional features they recite, claims 32 and 37 are allowable. Withdrawal of the rejection of claims 32 and 37 under 35 U.S.C. § 103(a) is respectfully requested.

For at least the reasons set forth above, applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further is desired in order to place the application in even better condition for allowance, the Examiner is invited to contact applicants' undersigned representative at the telephone number listed below.

Attached hereto is a marked-up version and an executed version of the changes made to the claims by the current amendment. The attached pages are captioned **"Version with markings to show changes made"** and **"Version showing executed changes"**, respectively.

Respectfully submitted,

Date: **August 15, 2002**

Raymond Van Dyke, Reg. No. 34,746
DORSEY & WHITNEY LLP
1001 Pennsylvania Avenue, N.W.
Suite 400 South
Washington, D.C. 20004
Tel. (202) 442-3000
Fax (202) 442-3199

Attachments: Version With Markings to Show Changes Made
Version Showing Executed Changes
Copy of All Nonpatent Literature Listed in previously filed IDS

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims

6. (Amended) The hardware upgrade according to claim 4, further comprising:

a [high volume]memory connected to the at least one microprocessor for storing the processed electronic mail.

7. (Amended) An advanced set top terminal for use with a television program delivery system comprising:

a memory for storing menu content information;

a receiver for receiving digitally compressed program signals and a control information stream, wherein the control information stream comprises a description of the contents of the program signals, commands to be sent to the set top terminal and transmission information of the control information stream;

a signal processor connected to the memory and the receiver for processing the control information stream to produce processed control information, whereby the processed control information is used to update the stored menu content information to produce updated menu content information;

a generator connected to the memory for generating message and menu displays using the updated menu content information, whereby the displays produce subscriber options for selection of other menus and television programs;

a subscriber interface in communication with the generator for selecting messages, menus, television programs or for entry of subscriber inputs; and

a tuner connected to the interface for tuning to one of the digitally compressed program signals to produce a tuned television program signal.

22. (Amended) A method for using an advanced set top terminal with a television program delivery system comprising the following steps:

storing menu content information;

receiving digitally compressed program signals and a control information stream, wherein the control information stream comprises a description of the contents of the program signals, commands to be sent to the set top terminal and transmission information of the control information stream;

processing the control information stream to produce processed control information;

1

updating the stored menu content information to produce updated menu content information;

generating message and menu displays using the updated menu content information, whereby the menu displays produce subscriber options for selection of other menus and television programs;

selecting the other menus, the television programs or a message display; and

tuning to one of the digitally compressed television programs signals to produce a tuned television program signal.